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“Step Out From the Old to the New”

IS 887 (1977): Animal Tallow [FAD 13: Oils and Oilseeds]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

SPECIFICATION FOR ANIMAL TALLOW

(Second Revision)

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Indian Standard

SPECIFICATION FOR ANIMAL TALLOW

(Second Revision)

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Indian Standard
SPECIFICATION FOR ANIMAL TALLOW
(Second Revision)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 5 May 1977, after the draft finalized by the Oils and Oilseeds Sectional Committee had been approved by the Chemical Division Council and the Agricultural and Food Products Division Council.

0.2 This standard was first published in 1960 and covered mutton tallow only. The first revision of this standard issued in 1968 laid down broad based specifications for all animal tallow generally marketed in the country for various uses. This had a desirable effect and production of tallow in the country become better organized.

0.3 Tallow is obtained from the body-fats of cattle, sheep and goats. Of these the fat derived from sheep, namely, mutton tallow is available in the country in fairly large quantities. Mutton tallow as well as its mixture with beef and goat tallow are also imported from various countries to meet the demand. Mutton tallow finds its largest use in the textile industry as sizing material. Its other industrial uses include the manufacture of soaps, fatty acids, lubricants, etc.

0.4 Through the use of the first revision of this standard it was found that in textile industry mainly mutton tallow is required and the specification of mixed tallow did not fully meet the needs of the textile industry. The concerned technical committee, therefore, decided to further revise this standard to cover mutton tallow for textile industry. In this revision, therefore, an additional type of the material (mutton tallow) is being included along with that of mixed animal tallow.

0.5 In the preparation of this revision substantial assistance has been derived from data supplied by Oil Technological Research Institute, Anantapur which is gratefully acknowledged.

0.6 This standard contains clause 5.1 which calls for agreement between the purchaser and the supplier.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes requirements and methods of sampling and test for animal tallow.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given under 2 of IS : 548 (Part I)-1964† shall apply.

3. TYPES

3.1 There shall be two types of the material as follows:

- a) *Type 1* — meant primarily for textile industry, and
- b) *Type 2* — meant for other industrial uses.

4. REQUIREMENTS

4.1 Description

4.1.1 The material of Type 1 shall be derived from the bodies of sheep by rendering or solvent extraction.

4.1.2 The material of Type 2 shall be derived from bodies of cattle, sheep or goat or a mixture thereof by rendering or solvent extraction.

4.2 The material of both types shall not have any marked rancid odour. It shall be clear on melting and free from adulterants, sediments, suspended and other foreign matter, separated water and added colouring and flavouring substance.

4.2.1 The clarity of the material shall be judged by absence of any turbidity after keeping the melted and filtered sample at 55°C for 24 hours.

4.3 The material shall also comply with the requirements given in Table 1.

*Rules for rounding off numerical values (*revised*).

†Methods of sampling and test for oils and fats: Part I Methods of sampling, physical and chemical tests (*revised*).

TABLE 1 REQUIREMENTS FOR ANIMAL TALLOW

(Clause 4.3)

Sl. No.	CHARACTERISTIC	REQUIREMENT FOR		METHOD OF TEST [REF TO CL No. IN IS : 548 (PART I)- 1964*]
		Type 1	Type 2	
(1)	(2)	(3)	(4)	(5)
i)	Moisture and insoluble impurities, percent by mass, <i>Max</i>	1.0	1.0	5 and 6
ii)	Colour in a 1-in cell on the Lovibond scale expressed as <i>T + 5 R</i> , not deeper than	15	40	13
iii)	Saponification value	192 to 202	192 to 202	15
iv)	Iodine value (Wijs)	28 to 40	30 to 56	14
v)	Acid value, <i>Max</i>	2	10	7
vi)	Unsaponifiable matter, percent by mass, <i>Max</i>	0.5	1.0	8
vii)	Titre of fatty acids, °C	46 to 51	40 to 51	12

*Methods of sampling and test for oils and fats: Part I Methods of sampling, physical and chemical tests (revised).

5. PACKING

5.1 The material shall be packed in suitable, well-closed containers as agreed to between the purchaser and the supplier.

6. MARKING

6.1 The containers shall be securely closed and legibly and indelibly marked with the following information:

- Manufacturer's name;
- Recognized trade-mark, if any;
- Name and type of the material;
- Net mass of the material in the container;
- Batch number or lot number in code or otherwise; and
- Month and year of manufacture.

6.1.1 The containers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. SAMPLING

7.1 Representative samples of the material shall be drawn as prescribed in 3 of IS: 548 (Part I)-1964*.

8. TESTS

8.1 Tests shall be carried out as prescribed in IS: 548 (Part I)-1964*. Reference to the relevant clauses of that standard is given in col 5 of Table 1.

8.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (see IS: 1070-1964†) shall be used in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Methods of sampling and test for oils and fats: Part I Methods of sampling, physical and chemical tests (revised).

†Specification for water, distilled quality (revised).

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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